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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,766	12/31/2001	Viral Kadakia	020581-000500US	9163

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EXAMINER

NGUYEN, VAN H

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/039,766	<b>Applicant(s)</b> KADAKIA ET AL.	
	<b>Examiner</b> VAN H NGUYEN	<b>Art Unit</b> 2126	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is in response to the application filed on December 31, 2001.
2. Claims 1-12 are presented for examination. Claims 1 and 10 are independent claims.
3. The cross reference related to the application cited in the specification must be updated (i.e., update the relevant status, with PTO serial numbers or patent numbers where appropriate, on page 2). Correction is required.

### *Specification*

4. The abstract of the disclosure is objected to because it **exceeds the limit of 150 words**. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Halliday et al.** (Pub. No.: US 2002/0083345 A1) in view of **Shu et al.** (Pub. No.: US 2002/0080888 A1).

7. **As to claim 1:**

- a. Halliday teaches the invention substantially as claimed including a method for transferring (*e.g., for transmission; para.0041*) messages (*e.g., the original local message; para.0041*) between a sending application program (*e.g., a client computer running on a local computer 11; para.0046 and fig.1*) and a receiving application program (*e.g., an application in the remote computer system; para.0090, lines 26-27*) across a distributed communication network (*e.g., a public network 18, such as the Internet; para.0035 and fig. 1*), wherein the distributed communication network includes a message source (*e.g., a local computer 11; para.0041 and fig. 1*) coupled to a message destination (*e.g., a public computer 20; para.0041 and fig. 1*), the method comprising:
- (i) segmenting (*e.g., splits; para.0048 and fig.10*) a message (*e.g., the encrypted message data; paras.0048 and 0049*) being received at the message source from the sending application program into a plurality of message segments (*e.g., data chunks; para.0048 and fig.10*) while assigning a common message identifier (*e.g., the local message ID 4A; para.0049 and fig.10/ the local message ID 4A common to all chunks;*

*para.0050) and a unique sequence number (e.g., each chunk is numbered; para.0049 and fig.10 /the current chunk sequence number; para.0052) to each of the message segments;*

- (ii) transferring the message segments from the message source to the message destination (*e.g., connect & transmit message 9H; figs. 9 and 10*) along with the common message identifier and unique sequence numbers assigned to the message segments (*e.g., prepend local message ID and num chunks to each chunk 10F; fig. 10*), with at least one of the message segments being transferred as the message is being received at the message source (*e.g., the message is delivered to the client application 24; para.0045*); and
  - (iii) assembling the message segments into a reassembled message as the message segments are received at the message destination (*e.g., the message recombination process...once all chunks are received ... concatenates all data chunks; paras.0081-0085/recombining the payload chunks to reform the encrypted local message data; para.0090, lines 23-24*).
- b. Halliday does teach the reassembled message (*e.g., recombining the payload chunks; para.0090, lines 23-24*) and the receiving application program (*e.g., the destination; para.0041*). Halliday, however, is silent on delivering at least a portion of the reassembled message to the receiving application program while the assembling is occurring.

- c. Shu teaches delivering at least a portion of the reassembled message to the receiving application program while the assembling is occurring (*e.g., when a sufficiently large number of message segments is received, the partially assembled message is forwarded to a decoder 8...which recovers the entire original message; para.0085*).
- d. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Halliday with Shu because Shu's teachings would have provided the capability for enhancing delivery assurance because not all message segments must be successfully received to permit the recipient to recover the original message.

8. **As to claim 2:**

- a. Halliday teaches simultaneously transferring multiple copies of the message segments along with the assigned common message identifier and unique sequence number over the distributed communication network (*e.g., connect & transmit message 9H; figs. 9 and 10*).
- b. Halliday, however, does not specifically teach "alternate paths."
- c. Shu teaches alternate paths (*e.g., message segments are forwarded along different paths; para.0024/the N message segments are forwarded to the destination along different paths; para.0071*).
- d. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Halliday with Shu because Shu's

teachings would have provided the capability for eliminating any requirement to resend an entire message due to network transmission failure.

9. **As to claim 3:**

Halliday teaches message segment is no more than 0.5 mega-bytes in size (*e.g., dividing the encrypted local message data into 'chunks' of predetermined size; para.0039*).

10. **As to claim 5:**

Halliday teaches transferring a message from a connector message source (*e.g., the control logic 44 then deposits the resulting encapsulated Data Packet into the send buffer 32 where it is made available for transmission to the public computer 20 via connections to transport 30; para.0063*).

11. **As to claim 6:**

Halliday teaches segmenting a message that is greater than 1 giga-byte in size (*e.g., communicating unlimited data between a local computer...and a remote computer; para.0090, lines 9-11*).

12. **As to claim 7:**

Halliday teaches assigning a last segment attribute specifying whether the message segment is the last message segment from a message to each of the message segments (*para.0049 shows the number of chunks is calculated and each chunk is numbered, so the  $N^{th}$  chunk is the last chunk of the message*).

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13. **As to claim 8:**

Halliday teaches streaming message segments to the message destination as each of the plurality of message segments becomes ready to be transferred (*e.g., connect & transmit message 9H; figs. 9 and 10*).

14. **As to claim 9:**

- a. Halliday teaches streaming the reassembled message to the receiving application program (*e.g., item 15E in fig. 15 and see fig. 17*).
- b. Halliday, however, does not specifically teach “as message segments are being assembled.”
- c. Shu teaches as message segments are being assembled (*e.g., the message segments are re-assembled as they are received at the receiver 20. When a sufficiently large number of message segments is received, the partially assembled message is forwarded to a decoder 8...which recovers the entire original message; para.0085*).
- d. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Halliday with Shu because Shu’s teachings would have provided the capability for enhancing delivery assurance because not all message segments must be successfully received to permit the recipient to recover the original message.



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15      Claims 4 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Halliday et al.** in view of **Shu et al.** as applied to claim 1 above and further in view of **Iverson et al.** (US 6,839,842 B1).

16.      **As to claim 4:**

- a.      Halliday teaches encrypting each of the message segments (*e.g., an encryption unit 38 is responsible for encrypting and decrypting the message data...dividing the encrypted message data into 'chunks'; para.0039*) and the assembling step (*e.g., recombining the payload chunks to reform the encrypted local message data; para.0090, lines 23-24*).
- b.      The combination of Halliday and Shu does not specifically teach “digitally signing” and, “during the assembling step, verifying the authenticity.”
- c.      Iverson teaches digitally signing (*e.g., a digital signature ... Info\_Segment 82; col.4, lines 1-3*) and, during the assembling step, verifying the authenticity (*e.g., verification section 60 may provide a mechanism enabling a recipient to confirm the source of Info\_Segment 82...provide by an authenticator; col.3, lines 58-64/authenticate Info\_Segment 82...verifying Info\_Segment 82; col.4, lines 16-33*).
- d.      It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Iverson with Halliday as modified by Shu because Iverson’s teachings would have provided data assurance and security in a network-based communications environment.

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17. **As to claim 10:**

- a. The rejection of claim 1 above is incorporated herein in full. Additionally, Halliday further teaches encrypting (*e.g., an encryption unit 38 is responsible for encrypting; para.0039*).
- b. Claim 1 further recites “digitally signing” and “verifying”.
- c. The combination of Halliday and Shu does not specifically teach “digitally signing” and “verifying”.
- d. Refer to the discussion of claim 4 above for rejection of “digitally signing” and “verifying”.

18. **As to claim 11:**

It includes the same limitation as in claim 2 above, and is similarly rejected under the same rationale.

19. **As to claim 12:**

It includes the same limitation as in claim 7 above, and is similarly rejected under the same rationale.

***Conclusion***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- (i) Clarke et al. (U.S. 6817018) teaches “Method of transferring messages between computer programs across a network.”

- (ii) Gregg (U.S. 6721335) teaches "Segment-controlled process in a link switch connected between nodes in a multiple node network for maintaining burst characteristics of segments of messages."
- (iii) Ayabe et al. (U.S. 6108530) teaches "System and method for transmitting a displayable message between short message entities in more than one data package."
- (iv) Costales et al. (U.S. 6044395) teaches "Method and apparatus for distributing personalized e-mail."
- (v) Roper et al. (U.S. 5870563) teaches "Method and apparatus for optimizing message transmission."
- (vi) Sopuch (WO 00/18078) teaches "Secure message exchange method using using intermediaries."
- (vii) Pande et al. "A message segmentation technique to minimize task completion time" 1991 IEEE, pp. 519-524.
- (viii) Kamal "efficient multi-segment message transmission with slot reuse on DQDB" 1991 IEEE, pp. 0869-0878.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. The examiner can also be reached on alternative Friday.

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22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756.
23. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

Commissioner for patents

P O Box 1450

Alexandria, VA 22313-1450



Van H. Nguyen